



Rockingham County and the towns of Bridgewater, Broadway, Dayton, Elkton, Grottoes, Mount Crawford, and Timberville

Water Source Overview

Major sources of water supply include groundwater wells, the North Fork Shenandoah River, and North River.

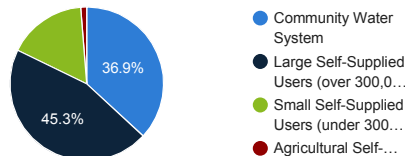
***Table 1:** Reported (2010) and projected (2040) water use by system type for Rockingham County in MGD

Type	Reported Use 2010 MGD	Projected Use 2040 MGD
Community Water System	7.004	23.537
Large Self-Supplied Users (over 300,000 gal/month)	8.609	8.609
Small Self-Supplied Users (under 300,000 gal/month)	3.140	3.906
Agricultural Self-Supplied Users	0.240	0.240

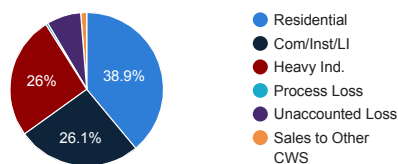
Water Use by System Type

Approximately 41,866 people use private groundwater wells for residential water supply. All tables and graphs represent reported water use including Sales to other localities, if applicable.

***Figure 1:** Percentage of reported water use by system type in 2010 (No use data shown on graph if less than .01 MGD: Refer to Table 1)



***Figure 2:** Disaggregated water use percentages for Community Water Systems in 2010 (No graph shown if no disaggregated use data reported)



***Table 2:** Reported (2010) and projected (2040) groundwater and surface water use for Rockingham County in MGD

Reported 2010 Groundwater Use (MGD)	Reported 2010 Surface Water Use (MGD)	Projected 2040 Groundwater Use (MGD)	Projected 2040 Surface Water Use (MGD)
15.83	3.16	26.61	9.68

***Figure 3:** Rockingham County highlighted in the Commonwealth of Virginia



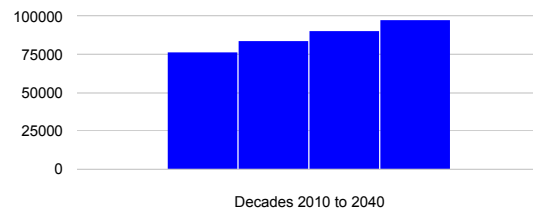
Projected Water Demand

Population and demand are projected to increase through the planning period. The following localities may experience a deficit during the planning period: Rockingham County (includes the Town of Mount Crawford) deficit of 1.272 MGD by 2020; Town of Bridgewater deficit of 0.05 MGD by 2030; Town of Broadway deficit of 0.23 MGD by 2040; Town of Grottoes deficit of 0.01 MGD by 2040; Town of Timberville deficit of 0.04 MGD by 2040. Several alternatives are recommended for meeting this additional demand in the future: development of new wells and treatment facilities; plant upgrades to provide additional supply and treatment capacity; development of new stream intakes; development of purchase water agreements with neighboring jurisdictions; and inter-jurisdictional collaboration on new infrastructure projects.

***Table 3:** Rockingham County population projections by decade from 2010 to 2040 (data gathered from VEC projections - 05/20/13)

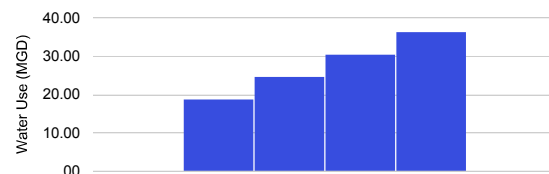
2010	2020	2030	2040	% Change (2010-2040)
76,314	83,431	90,341	97,249	27.6%

***Figure 4:** Rockingham County population projections by decade for 2010, 2020, 2030 & 2040



***Table 4 & Figure 5:** Rockingham County water demand trends by decade for 2010, 2020, 2030 & 2040 in MGD

Reported Use 2010 MGD	Projected Use 2020 MGD	Projected Use 2030 MGD	Projected Use 2040 MGD	Percent Change (2010-2040)
18.99	24.76	30.53	36.29	91.1%



Drought Management Practices

The County and Towns adopted ordinances for the implementation and enforcement of the Drought Response and Contingency Plan. (Upper Shenandoah River Basin Regional WSP)